

## ABSTRACT

**(57)** A working medium supply controller in heat exchanger comprising means (M1) for predicting a reference supply amount ( $G_{\text{steam\_set}}$ ) of working medium in the future based on the detection values of heating medium measuring sensors (S1, S2) and working medium measuring sensors (S3, S4), means (M2) for calculating variation in the quantity of heat ( $Q_{\text{mas}}$ ) of a heat exchanger tube per unit time, means (M3) for calculating a correction supply amount ( $dG_{\text{steam}}$ ) of the working medium based on the variation in the quantity of heat ( $Q_{\text{mas}}$ ) calculated by the means (M2) for calculating variation in the quantity of heat, and means (M4) for calculating a target supply amount ( $dG_{\text{steam\_target}}$ ) of the working medium based on the reference supply ( $G_{\text{steam\_set}}$ ) calculated by the means (M1) for predicting a reference supply and the correction supply amount ( $dG_{\text{steam}}$ ) calculated by the means (M3) for calculating a correction supply amount. Thermal energy recovery efficiency of heating medium can be maximized by minimizing heat mass loss in the heat exchanger tube of the heat exchanger during a transient period where thermal energy of heating medium varies.